

# 2007

*Commonwealth  
of Massachusetts*

PUBLIC  
EMPLOYEE  
RETIREMENT  
ADMINISTRATION  
COMMISSION

## INVESTMENT REPORT

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Auditor of the Commonwealth  
*Vice Chairman*

**The Honorable Deval Patrick**  
Governor of the Commonwealth

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**Donald R. Marquis**  
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*Executive Director*



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# LETTER FROM THE EXECUTIVE DIRECTOR

May 22, 2008

Last year the Public Employee Retirement Administration Commission (PERAC) released the Investment Report for 2006 that contained investment and funding results in light of legislative deliberations regarding pension issues. Those deliberations led to the passage of Chapter 68 of the Acts of 2007, which mandates that systems that do not meet certain investment and funding standards transfer assets to the Pension Reserves Investment Trust Fund (PRIT) to be invested by the Pension Reserves Investment Management Board (PRIM). In light of the impact that the 2007 results may have on some systems, the Commission believes that it is imperative that this data be disseminated as soon as possible and we are pleased to release this Investment Report for 2007. We anticipate that the full Annual Report for 2007 will be ready for distribution in June.

The two comparative components established under Chapter 68 are funded ratio and 10 year investment performance. The funded ratio standard is 65% and, based on the performance results for 2007, the investment standard is 7.88% (PRIM 10 year return 9.88% minus 2.00%).

PERAC, in Memo #35, 2007, outlined the principles that it would apply in conducting analysis pursuant to Chapter 68. It is suggested that boards review those principles. Such a review is particularly important to boards that may be subject to a Chapter 68 Order this year.

This report delineates investment returns for several periods: 2007, 2003-2007 inclusive, 1998-2007 inclusive, and since inception through 2007. The funded ratios are as of the date of the most recent valuation available to PERAC. Any actuarial valuations received after April 1, 2008 have not been included.

I hope you find this report informative and helpful in gleaning an accurate assessment of the state of our retirement systems.

Sincerely,



Joseph E. Connarton  
Executive Director

# PERFORMANCE REVIEW AND ANALYSIS

As of December 31, 2007, the composite asset allocation for the 63 local systems that invested predominantly on their own was: 38.5% Domestic Equity, 15.5% International Equity, 2.4% Emerging Markets, 21.5% Fixed Income (Domestic and International, including TIPS), 1.9% High Yield, 7.8% Real Estate, 0.3% Timber, 3.0% Alternative Investments, 4.7% Hedge Funds, 1.3% Balanced Funds, 1.5% PRIT Core, and 1.5% Cash. Assets in these systems totaled nearly \$15.4 Billion. The composite asset allocation of these systems is similar to reported average asset allocations from national surveys of state and local pension plans.

Nevertheless, there is a wide divergence in our local systems' asset allocations compared to the composite levels. For instance, allocations to domestic equity ranged from 11% to 66% and allocations to international equity ranged from zero (4 systems) to 39%.

While several systems had allocations in excess of 10% in real estate, fifteen systems had no explicit exposure to this asset class, including five systems with assets in excess of \$100 million. Forty four systems had at least some exposure to alternative investments, but only 22 of these systems had allocations of at least 2%. Fifteen systems had allocations to emerging markets, 14 systems had explicit allocations to high yield fixed income, and 7 systems invested in timber.

At the beginning of 2007, 26 local systems invested all (or essentially all) of their assets in the PRIT Core Fund. During the year, another 15 systems joined

PRIT, either independently or as a result of Chapter 68. Assets of these 41 systems totaled nearly \$5.2 billion at year-end. The asset allocation of that \$53.7 billion fund as of December 31, 2007, was 23.8% Domestic Equity, 19.7% International Equity, 5.9% Emerging Markets, 17.9% Fixed Income (11.5% US Bonds and 6.4% TIPS), 4.5% High Yield, 9.6% Real Estate, 2.0% Timber, 7.4% Alternative Investments, 4.9% Absolute Return (Hedge Funds), and 4.4% Portable Alpha (Hedge Funds). Compared to public funds nationwide, PRIT has below-average allocation to domestic equity and above-average exposure to nontraditional asset classes.

In addition to the 41 systems that invested essentially all their assets in the PRIT Core Fund at year-end, 11 systems had partial investments in the PRIT Core Fund (in some cases, representing a significant portion of total assets) and over 40 systems participated in one or more of the PRIT Fund's segmentation options.

Performance for 2007 among the 104 local systems ranged from 4.8% to 16.4%. The median return was 9.7% and the composite return was 11.3%. For the 78 systems that began 2007 investing on their own, the median return was 8.6%. Fifteen of these systems joined the PRIT Fund at various times during 2007, mostly during the latter part of the year. For the 63 systems that still invested on their own at year-end, the median return was 8.5%.

The median return for the local systems that invested totally with PRIT for the entire year approximated that of the Fund itself, which was

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11.9%. Internal cash positions or cash flows may have enhanced or subtracted from the returns of individual systems relative to PRIT's basic return. In recent years, a fundamental fact of institutional investing involving endowment funds, foundations, and public and private pension funds is that larger entities have performed decisively better than smaller ones. Indeed, the PRIT Fund's size has enabled it to invest meaningfully in a wider range of asset classes than many of the local systems, and its clout has enabled it to gain access to the top tier of managers in these nontraditional asset classes, particularly in alternative investments. Thus, the PRIT Fund's performance in 2007 was enhanced by its holdings in several asset classes that provided returns greater than those from US stocks or bonds: Alternative Investments, up 39.3%; Timber, up 38.6%; Emerging Markets, up 33.6%; Hedge Funds, up 11.0%; and Real Estate, up 9.1%. Returns from Alternative Investments and Timber reflected PRIT's access to top tier managers in those asset classes.

It's important to emphasize that, although most systems have lagged behind the PRIT Fund, the local systems that invest on their own have, on the whole, still done well. As in previous years, the 2007 median return (8.6%) for the non-PRIT local systems was within the range of the median returns of the public fund medians, such as New England Pension Consultants/ICC, 8.38%, and Wilshire/TUCS, 7.43% (public funds less than \$1 billion) and 8.70% (public funds greater than \$1 billion).

Among the non-PRIT systems that performed best in 2007, some benefited from strong returns from several asset classes in a well diversified portfolio while others had relatively basic asset allocations

but enjoyed extraordinary returns from their equity manager. Of the five systems that outperformed PRIT, three did so as a result of their equity manager reaping huge profits from some aggressive sectoral bets and excellent stock selection in the equity market, including underweighting financial stocks and overweighting technology and energy. This manager has had very volatile performance over the years but last year provided the firm's public fund clients with returns of over 20% from domestic equity, compared to the S&P 500's 5.5% rise. One system that outperformed PRIT did so with outstanding performance from domestic and international equity managers as well as from a tactical asset allocation manager, while another system had strong returns from emerging markets and real estate to go along with excellent equity performance. Two of the top ten performing local systems benefited from investing the majority of their assets in the PRIT Fund.

In contrast to the extraordinary equity returns in excess of 20% enjoyed by the best performing local systems last year, the worst performing system registered 2.3% from domestic equity and also had little portfolio diversification. Other systems similarly exemplified the sure-fire formula for poor performance in 2007: insufficient asset class diversification and below-benchmark stock and/or bond returns. Some systems among the worst performers did have reasonably diversified asset allocation but suffered from mediocre performance across the board from their managers.

## 2007 Returns & Annualized Past Returns (In Percent)

	Return (2007)	5-Year Return	10-Year Return	Return (Since 1985)
ADAMS	7.85	8.60	6.77	9.36
AMESBURY	9.20	12.13	8.10	9.34
ANDOVER	5.12	9.32	6.42	9.84
ARLINGTON	4.78	12.23	6.94	10.15
ATHOL	9.91	9.42	6.37	8.44
ATTLEBORO	8.31	13.42	8.37	10.21
BARNSTABLE COUNTY	9.26	12.82	6.84	8.64
BELMONT	10.72	13.34	8.55	10.43
BERKSHIRE REGIONAL	11.99	16.05	9.78	10.76
BEVERLY	9.26	11.60	9.30	10.12
BLUE HILLS REGIONAL	11.96	15.96	8.90	10.23
BOSTON	10.39	13.71	8.08	10.43
BRAINTREE	7.82	12.92	8.36	9.97
BRISTOL COUNTY	7.52	12.35	8.40	10.22
BROCKTON	7.01	13.16	8.91	10.47
BROOKLINE	6.96	12.01	8.39	10.29
CAMBRIDGE	11.89	12.31	8.62	10.82
CHELSEA	12.10	14.60	5.95	9.28
CHICOPEE	6.93	11.53	7.01	9.55
CLINTON	6.04	14.46	7.84	9.15
CONCORD	8.70	11.78	7.84	9.82
DANVERS	5.77	10.00	7.16	9.26
DEDHAM	12.10	16.30	10.00	11.46
DUKES COUNTY	11.43	11.94	7.08	8.53
EASTHAMPTON	12.07	16.37	7.74	9.73
ESSEX COUNTY	9.85	12.09	8.15	10.36
EVERETT	11.90	13.69	6.08	9.94
FAIRHAVEN	11.91	16.16	9.96	11.18
FALL RIVER	7.42	10.61	6.61	9.81
FALMOUTH	7.08	11.89	7.10	10.43
FITCHBURG	9.87	10.70	6.58	8.92
FRAMINGHAM	12.11	16.38	9.32	11.14
FRANKLIN REGIONAL	11.13	11.57	8.16	9.45
GARDNER	12.05	16.36	10.05	11.32
GLOUCESTER	9.25	13.03	7.87	10.54
GREATER LAWRENCE	8.60	7.96	6.71	7.96

## Funded Ratios

Funded Ratio	Date of Most Recent Valuation
90.7%	1/1/2006
56.3%	1/1/2006
73.0%	1/1/2007
73.4%	1/1/2007
53.3%	1/1/2007
75.5%	1/1/2007
62.6%	1/1/2007
52.9%	1/1/2006
82.0%	1/1/2007
56.2%	1/1/2006
66.7%	1/1/2006
64.4%	1/1/2006
71.6%	1/1/2006
65.8%	1/1/2007
89.2%	1/1/2007
63.7%	1/1/2006
85.4%	1/1/2006
47.6%	1/1/2007
58.8%	1/1/2007
66.3%	1/1/2007
90.5%	1/1/2006
71.3%	1/1/2007
78.7%	1/1/2006
64.6%	1/1/2007
66.6%	1/1/2006
69.6%	1/1/2006
33.3%	1/1/2007
78.9%	1/1/2007
57.1%	1/1/2006
66.4%	1/1/2006
52.2%	1/1/2006
65.2%	1/1/2006
67.0%	1/1/2006
67.4%	1/1/2007
49.5%	1/1/2006
95.3%	1/1/2007

## 2007 Returns & Annualized Past Returns (In Percent)

	Return (2007)	5-Year Return	10-Year Return	Return (Since 1985)
GREENFIELD	9.16	11.83	7.98	9.88
HAMPDEN COUNTY REG.	6.59	11.23	7.79	10.05
HAMPSHIRE COUNTY	5.76	12.34	7.37	9.49
HAVERHILL	11.75	14.19	10.88	11.83
HINGHAM	12.02	16.35	10.02	11.12
HOLYOKE	7.34	11.28	8.01	10.65
HULL	12.09	15.43	8.10	9.23
LAWRENCE	9.40	11.66	5.83	9.04
LEOMINSTER	10.82	12.86	8.55	9.89
LEXINGTON	13.32	13.82	8.41	10.71
LOWELL	11.79	14.56	9.28	10.97
LYNN	10.24	12.44	7.24	9.49
MALDEN	15.86	11.76	9.59	11.12
MARBLEHEAD	12.07	16.39	9.90	11.05
MARLBOROUGH	6.82	11.80	7.61	9.64
MASS HOUSING FINANCE	7.37	10.44	7.43	8.66
MASSPORT	7.93	12.98	7.93	10.49
MASS TURNPIKE	8.46	11.69	7.69	9.74
MASS WATER RESOURCES	8.57	13.07	8.37	8.66
MAYNARD	8.92	11.28	7.65	9.03
MEDFORD	6.91	11.85	8.34	10.26
MELROSE	11.13	12.37	7.83	9.96
METHUEN	6.88	10.60	7.25	9.18
MIDDLESEX	10.69	10.73	6.91	9.85
MILFORD	8.85	12.01	8.19	9.88
MILTON	11.60	15.60	9.68	11.25
MINUTEMAN REGIONAL	12.12	16.49	10.08	11.46
MONTAGUE	12.10	16.37	10.04	10.93
NATICK	9.14	10.24	5.03	9.45
NEEDHAM	12.06	16.20	9.97	11.69
NEW BEDFORD	10.47	14.23	8.65	9.27
NEWBURYPORT	11.86	15.09	8.60	9.68
NEWTON	10.91	12.54	7.83	10.20
NORFOLK COUNTY	9.94	13.16	7.47	10.11
NORTH ADAMS	16.43	12.10	9.16	10.85
NORTH ATTLEBORO	5.35	10.40	7.08	9.59

## Funded Ratios

Funded Ratio	Date of Most Recent Valuation
67.5%	1/1/2007
60.4%	1/1/2006
63.4%	1/1/2007
60.8%	1/1/2006
73.4%	1/1/2007
66.0%	1/1/2007
42.9%	1/1/2006
47.2%	1/1/2007
79.3%	1/1/2007
88.4%	1/1/2006
58.8%	1/1/2007
48.1%	1/1/2007
73.3%	1/1/2008
83.3%	1/1/2006
64.5%	1/1/2007
91.6%	1/1/2005
103.0%	1/1/2007
78.1%	1/1/2006
82.7%	1/1/2007
75.1%	1/1/2007
64.9%	1/1/2006
59.4%	1/1/2006
54.6%	1/1/2007
47.9%	1/1/2006
73.5%	1/1/2007
80.5%	1/1/2007
118.3%	1/1/2007
77.8%	1/1/2006
66.6%	1/1/2006
79.5%	1/1/2007
44.9%	1/1/2007
55.7%	1/1/2006
66.1%	1/1/2007
62.3%	1/1/2007
67.1%	1/1/2007
82.6%	1/1/2006

## 2007 Returns & Annualized Past Returns (In Percent)

	Return (2007)	5-Year Return	10-Year Return	Return (Since 1985)
NORTHAMPTON	15.54	11.67	9.06	10.56
NORTHBRIDGE	12.10	16.39	10.06	11.22
NORWOOD	8.15	12.58	7.90	10.28
PEABODY	10.67	11.40	7.50	10.21
PITTSFIELD	7.93	11.21	7.13	9.61
PLYMOUTH	8.25	12.81	7.34	10.08
PLYMOUTH COUNTY	7.59	14.32	8.73	10.81
PRIM BOARD	11.90	16.31	9.88	11.52
QUINCY	6.75	11.70	8.12	9.65
READING	12.17	16.39	9.98	11.11
REVERE	11.38	15.68	9.57	9.90
SALEM	7.81	11.42	7.61	9.69
SAUGUS	11.98	16.26	10.03	11.03
SHREWSBURY	9.90	12.40	8.73	10.50
SOMERVILLE	12.14	12.46	8.46	10.03
SOUTHBRIDGE	6.64	10.78	7.78	9.76
SPRINGFIELD	11.94	13.39	7.14	9.93
STATE	12.05	16.41	9.91	11.37
STATE TEACHERS	12.05	16.41	9.91	11.38
STONEHAM	11.96	16.30	9.14	10.46
SWAMPSCOTT	11.51	11.73	9.05	10.67
TAUNTON	8.52	11.69	8.14	11.03
WAKEFIELD	12.06	16.32	10.01	11.65
WALTHAM	9.18	12.62	6.71	10.22
WATERTOWN	7.72	12.38	7.50	9.65
WEBSTER	8.28	11.88	8.20	9.13
WELLESLEY	8.41	13.53	8.86	12.07
WEST SPRINGFIELD	9.43	10.24	7.10	9.19
WESTFIELD	7.09	11.15	6.50	9.75
WEYMOUTH	7.50	14.29	9.23	11.66
WINCHESTER	11.13	14.58	9.05	10.99
WINTHROP	11.81	14.57	7.32	10.30
WOBURN	10.62	13.31	8.70	10.80
WORCESTER	9.12	14.33	9.10	10.51
WORCESTER REGIONAL	8.72	10.58	7.20	9.69
<b>COMPOSITE</b>	<b>11.33</b>	<b>15.35</b>	<b>9.40</b>	<b>10.96</b>

## Funded Ratios

Funded Ratio	Date of Most Recent Valuation
64.1%	1/1/2007
74.7%	1/1/2006
89.7%	1/1/2007
58.0%	1/1/2006
55.6%	1/1/2007
68.3%	1/1/2007
61.4%	1/1/2007
Not Applicable	Not Applicable
65.0%	1/1/2007
75.7%	7/1/2007
50.2%	1/1/2006
50.8%	1/1/2006
66.3%	1/1/2007
71.3%	1/1/2006
62.9%	1/1/2007
52.1%	1/1/2006
42.6%	1/1/2005
89.4%	1/1/2008
71.0%	1/1/2007
68.2%	1/1/2007
52.5%	1/1/2006
66.4%	1/1/2006
71.5%	1/1/2006
51.1%	1/1/2006
67.5%	1/1/2007
45.0%	1/1/2006
103.2%	1/1/2006
58.8%	1/1/2006
74.0%	1/1/2007
71.9%	1/1/2007
81.5%	1/1/2007
69.4%	1/1/2007
77.3%	1/1/2007
85.6%	1/1/2007
56.3%	1/1/2007
Not Applicable	Not Applicable



NOTES:



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